



Patent
Attorney's Docket No. 018775-718

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Patent Application of

Kenji ISHIBASHI et al.

Application No.: 08/988,537

Filed: December 10, 1997

For: IMAGE OBSERVATION APPARATUS

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) Group Art Unit: 2765
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) Examiner: A. Awad

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REPLY TO FINAL OFFICE ACTION

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In reply to the final Office Action which issued on June 29, 2001, Applicants respectfully request reconsideration of the above-captioned application.

The Office Action includes a rejection of claims 1, 23 and 25 under 35 U.S.C. § 103 as allegedly being obvious over the *Tabata* patent (U.S. Patent No. 5,579,026) in view of the *Tosaki* patent (U.S. Patent No. 5,844,530); rejection of claims 2-4 under 35 U.S.C. § 103 as allegedly being obvious over the *Tabata* and *Tosaki* patents as applied to claim 1, and in further view of the *Takasu Tomoji* patent publication (Japanese Patent Publication No. 03056923 A, referred to as the *Takasu* patent publication in the Office Action) and finally a rejection of claims 23 and 26 under 35 U.S.C. § 103 as allegedly being obvious over the *Tosaki* and *Tabata* patent publications as applied to claims 23 and 25, and in further view of the newly cited *Kodama* patent (U.S. Patent No. 6,124,843). These rejections are respectfully traversed.

As a minor note, the *Kodama* patent does not appear to be listed on a form PTO-892 or a form PTO-1449 and a copy was not supplied with the Official Action. Accordingly, a form PTO-1449 listing the same as the enclosed for the convenience of the Examiner.

While many distinctions exist between the applied art and the pending claims, Applicants will focus on the Office's response to Applicants arguments appearing beginning at page 7 of the Office Action. This section primarily deals with the passage of the *Tosaki* patent at column 16. Column 16, lines 22-39 states:

If a better perception of the external environment is to be achieved in the *course of a game*, the visor 80 is opened by being turned upward about the fulcrums 80L and 80R. This increases the quantity of outside light that enters the display device 2 from the outside, opens the switch 92 of the fluorescent tube 71, and *stops the images from being projected on the display device 2*. The external environment can therefore be clearly perceived even when the HMD 1 is still worn. *It is also possible at this time to depress the pause switch on the control pad 201 and to temporarily stop the game.*

To *resume the game*, the visor 80 should be turned downward about the fulcrums 80L and 80R, the switch 92 of the fluorescent tube 71 closed, and the fluorescent tube 71 lighted. *If the game is temporarily stopped, the pause button on the control pad 201 should be depressed again to cancel the pause mode.* (Emphasis added.)

Applicants respectfully disagree with the Examiner's assessment of what this language means. The Office suggests that the visor switch 92 and the pause switch of the control pad 201 is analogous to the stop button and the pause button of a VCR. The Office Action also states "that the images and the game are same thing." Applicants respectfully submit that neither of these statements are supported by the actual text of the *Tosaki* patent.

The *Tosaki* patent states unambiguously that the movement of the visor "opens the switch 92 of the fluorescent tube 71." This means that the images are simply no longer projected because they are no longer lit. The images are actually still being generated, they are just not viewable by the user. No other interpretation of this passage is possible

because of the later mention of the pause switch. The pause switch is necessary because the game would continue without the user's observation if the game were not paused. The passage in the *Tosaki* patent is unambiguous in this regard and the Applicants strenuously submit that the Office has misinterpreted the text thereof.

The *Tosaki* patent cannot meet the recitation of the controller not allowing the changing of an image which is displayed on the image display device since no image is displayed once the visor is moved in an up position.

Further, it would not be obvious for the pause switch to be operable at a time other than when the visor has caused the fluorescent tube switch 92 to turn off the fluorescent tube by the movement of the visor *to* actually cause the images to pause, rather than the game as the *Tosaki* patent states. With respect to the Office's suggestion that the *game* pause switch of the *Tosaki* patent is like a *video* pause switch on a VCR, it is noted that a VCR displays a non-interactive movie on a display screen, and not a heads-up display. There is no disorientation on the viewer's part simply by pausing the video on a VCR. In very striking contrast, if one simply froze the image on a heads-up display, the image of which is controlled by the orientation of the heads-up display, the subject would be disoriented. This would be because upon application of the pause switch the world would "freeze" even though user's head was moving. As stated before, the "cockpit" of the game being displayed would freeze, causing the cockpit to appear to spin when the user moved his head. Instead, Applicants interpret this passage of the *Tosaki* patent as it is written. The passage states that the pause switch is used "to temporary stop the game." The game is an interactive process. There is no reason to think that stopping the interactive process would freeze the image being displayed as the users field of vision. In fact, every

indication is that this would be inappropriate particularly for a head mounted display since freezing the image would have a disorienting effect on the user.

It should not be forgotten that the present invention finds its origin a problem of handheld display devices wherein when a user sets the display device down, he expects it to be oriented at the same location when it is picked back up. Otherwise he would be disoriented as to what he is currently looking at since if the image is allowed to change as it is set down, when picked back up the scene might be completely different than expected. Since this problem does not occur in head mounted displays, no obvious motivation exist for modification to the *Tosaki* patent which would result in the invention recited in the present claims.

Applicants will not dwell on the other characteristics and the features of the present invention recited in the rejected claims which serve to distinguish it from the prior art in light of the after final nature of this response. However, Applicants earlier comments are herein incorporated by reference. The newly cited *Kodama* does not teach anything that alters the validity of the foregoing arguments. Figures 10 of the *Kodama* patent shows an embodiment where a supervisor can supervise and correct the operations of an operator via a camera 32 mounted on the visor 29 of the operator. As such, it does not disclose a controller which controls the image which is displayed [or the image display] by controlling a posture of the camera "(claim 24) or "by operating image data which are output from the image forming devices" (claim 26).

It is believed that with these clarifications and comments, the rejection should be withdrawn. In light of the foregoing, Applicants respectfully request issuance of a Notice

of Allowance. Should any residual issues exist, the Examiner is invited to contact the undersigned at the number listed below.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By:



Charles F. Wieland III
Registration No. 33,096

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620

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